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| 09/944,119 | 09/04/2001 | Allan P. Plummer | 1340-7 | 1754 |

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| EXAMINER |
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NGUYEN, PHUNG

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| ART UNIT | PAPER NUMBER |
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2632

DATE MAILED: 01/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/944,119

Applicant(s)

PLUMMER, ALLAN P.

Examiner

Phung T Nguyen

Art Unit

2632

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-30, 44-46 and 49-52 is/are allowed.
- 6) ☒ Claim(s) 31-43, 47, 48, 53 and 54 is/are rejected.
- 7) ☒ Claim(s) 55-60 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 31-43, 47, 48, 53, and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hollabaugh et al. (U.S. Pat. 4,131,882) in view of Evelyn-Veere et al. (U.S. Pat. 4,176,395).

Regarding claim 31: Hollabaugh et al. disclose a digital two-wire irrigation control system with feedback, which comprises distributing power and a reference datum to the second stations via a distribution medium (col. 4, lines 39-52). Hollabaugh et al. do not teach activating the plurality of the stations at different prescribed phase offsets from the reference datum so that one of the activated stations draws power from the alternating signal at a different time than at least one other one of the activated stations. However, Evelyn-Veere et al. disclose interactive irrigation control system which comprises activating the plurality of the stations at different prescribed phase offsets from the reference datum (fig. 8a, col. 2, lines 22-38, and col. 31, lines 28-41) and one of the activated stations draws power from the alternating signal at a different time than at least one other one of the activated stations (col. 2, lines 6-8, and col. 35, lines 59-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teaching of Evelyn-Veere et al. into the system of Hollabaugh because they both teach an irrigation system for controlling a large number of irrigation or

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sprinkler valves in accordance with one or more desired schedules of operation. It is seen that the teaching of Evelyn-Veere et al. would increase the flexibility of the system of Hollabaugh by providing automatic selection can be made from multiple schedules, each of which is designed to provide optimum irrigation of a particular area for a particular climatic or soil condition.

Regarding claim 32: Hollabaugh et al. disclose the alternating power signal has a substantially square waveform (col. 11, lines 49-54).

Regarding claim 33: Hollabaugh et al. disclose a plurality of activation marks after the reference datum (col. 11, lines 49-68, and col. 12, lines 1-25).

Regarding claim 34: Hollabaugh et al. disclose a predetermined sequence of positive and negative components in the alternating power signal (col. 4, lines 64-68, and col. 5, lines 1-12).

Regarding claim 35: Refer to claim 34 above.

Regarding claim 36: Hollabaugh et al. disclose sending instruction to each station whether or not to activate embedded in the plurality of activation marks (col. 5, lines 4-8).

Regarding claim 37: All the claimed subject matter is already discussed in respect to claims 31 and 36 above.

Regarding claim 38: Hollabaugh et al. disclose the power switching circuit operable to provide an alternating power signal of variable frequency over the distribution medium (col. 4, lines 39-45, and col. 11, lines 42-54).

Regarding claim 39: Hollabaugh et al. disclose the alternating power signal that has a substantially square waveform (col. 11, lines 19-54).

Regarding claim 40: Refer to claim 33 above.

Regarding claim 41: Refer to claim 34 above.

Regarding claim 42: Refer to claim 35 above.

Regarding claim 43: Refer to claim 36 above.

Regarding claim 47: Hollabaugh et al. disclose the second stations comprising part of an irrigation system (col. 4, lines 39-52).

Regarding claim 48: Refer to claim 47 above.

Regarding claim 53: All the claimed subject matter is already discussed in respect to claim 37 above.

Regarding claim 54: Refer to claim 47 above.

Allowable Subject Matter

3. Claims 1-30, 44-46, and 49-52 are allowed.

Claims 55-60 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Fridley et al. [U.S. Pat. 6,229,432] disclose an intelligent transceiver module particular suited for power line control system.

b. Johnston et al. [U.S. Pat. 4,400,688] disclose a method and apparatus for communication over electric power line.

c. Ahlse et al. [U.S. Pat. 5,493,267] disclose an arrangement for the transfer of control commands in an apparatus or a machine-operated form the mains.

d. Buhring et al. [U.S. Pat. 6,097,761] disclose a method and system for the transmission of data and power.

e. Budek [U.S. Pat. 4,348,582] discloses a communication via an electricity supply main.

f. Takagi [U.S. Pat. 4,988,972] discloses a method for transmitting and receiving signals over transmission power lines.

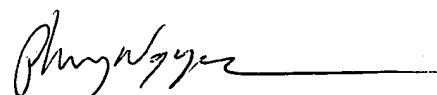
g. Honda [U.S. Pat. 3,818,466] discloses an information system utilizing pulse DIP signals superimposed on a carrier signal.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phung T Nguyen whose telephone number is 571-272-2968. The examiner can normally be reached on 8:00am-5:30pm Mon thru. Friday, with alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J. Wu can be reached on 571-272-2964. The fax numbers for the organization where this application or proceeding is assigned are 703-305-3988 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

Phung Nguyen



Date: December 27, 2004